

REMARKS:

Reconsideration of the Examiner's objection to claims 1-6, 7-18 and 19-22 on the grounds that the claims are misnumbered is respectfully requested.

The claims have been renumbered with this response in a more conventional format, and in accordance with the renumbering suggested by the Examiner. All references to the claims herein assume the renumbered format. Accordingly, it is respectfully submitted that the Examiner's objection has been overcome.

In light of the Examiner's comment that "misnumbered claims have been renumbered 1-22", Applicants presume that the renumbering of the claims has occurred by Examiner's amendment. Hence, the claims are merely presented in their renumbered format in this response and without markings, since amending the claims with this response to place them in the renumbered format would no longer be appropriate. Since the renumbered claims are, technically speaking, not original claims (given that they have been previously amended), they have been given the identifier "Previously Presented".

Reconsideration of the Examiner's rejection of claims 1-6 and 19-21 under 35 U.S.C. § 103 as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) is respectfully requested.

Rosenberg et al. discloses a routing strategy (that is, an addressing protocol) useful in a satellite communications system in which a number of ground-based sectors are serviced by a satellite communications network, with each individual satellite in the network forming a network node. The ground-based sectors contain a plurality of cells, and each of the cells contains a plurality of terminals. Each of the ground-based sectors is provided with an address that incorporates a

binary Gray code, and the appropriate routing of a packet of information that arrives at a satellite node and that is addressed to a particular ground-based sector (and more particularly, to a particular terminal contained within a particular cell within a particular ground-based sector) is determined from the Grey code in the packet header.

Turning now to the Examiner's comments, the Examiner appears to argue, in essence, that each of the terminals within a cell in the system of Rosenberg et al. constitutes a selected "application", and that the Grey code incorporated into the packet header in packets transmitted over the network constitutes an "application format". The Examiner also appears to interpret each of the satellite nodes of Rosenberg et al. as being a "selected application processor" within the meaning of the present claims.

However, the Examiner is respectfully reminded that the terms within patent claims must be construed in accordance with the meaning that would be given to them by one of ordinary skill in the art. In the present case, the term "application format", as used to modify the word "message", would be interpreted by one skilled in the art to mean that the message has a configuration that allows it to be processed by a particular software application adapted to process files having that configuration. This can be seen, for example, by comparing claim 19 to claim 1. Thus, claim 1 recites the step of "ascertaining whether the message is in a selected application format", while the analogous step in claim 19 recites "ascertaining whether the message is susceptible to be processed by a particular application".

As further evidence of the meaning of the term "application format", claim 20 notes that the particular application is "a decryption application", and that a message "susceptible to be processed by the particular application comprises an encrypted message". Hence, one specific example

of an application format is a packet encryption which can be decrypted by a particular decryption application. This is consistent with the meaning suggested above for the term "application format".

With the above noted definition of the term "application format" in mind, it is clear that, although Rosenberg et al. has some discussion about "formatting" incoming packets (see, e.g., Col. 10, Lines 7-10), such formatting is not application formatting. In particular, the "formatting" referred to in Rosenberg et al. is limited to changing address information contained in the packet header. Such formatting has no affect on the "application format" of the packet.

The situation is analogous to an email message that is addressed to a particular recipient. While the address information specified in the message header may cause the message to be directed to a particular destination, and while reformatting that address information may change the destination of the message, the software that is capable of processing the message (e.g., Microsoft Outlook<sup>®</sup>) remains the same (that is, the application format of the message remains unchanged). Thus, the "formatting" described in Rosenberg et al. is address formatting, not "application formatting" as that term is used in the present application and claims.

Indeed, it is clear that the application format of packets is immaterial to the systems and methods described in Rosenberg et al., and thus there is no reason for performing the step of "ascertaining whether the message is in a selected application format" in the systems and methods described therein. In particular, the systems and methods of Rosenberg et al. are concerned with routing packets through a satellite communications network (hence the title "SATELLITE COMMUNICATIONS ROUTING AND ADDRESSING METHOD"). It makes no difference for the purposes of those systems and methods

whether the packets contain, for example, video data that can be processed by a video software application, or text data that can be processed by a word processing program.

Since Rosenberg et al. fails to teach or suggest the step of "ascertaining whether the message is in a selected application format", Rosenberg et al. fails to teach or suggest each and every element of the presently claimed invention. Hence, Rosenberg et al. does not render claim 1 obvious.

Applicants also respectfully disagree with the Examiner's assertion that each of the terminals within a cell in the system of Rosenberg et al. constitutes a selected "application". The Examiner is again respectfully reminded that terms in a claim must be construed in accordance with the meaning that would be given to them by one of ordinary skill in the art. In the present case, one skilled in the art would not construe the term "application" as reading on the edge terminals in the systems of Rosenberg et al., because that is not the commonly understood meaning for this term in the art. Thus, for example, the Free On-Line Dictionary of Computing (<http://foldoc.doc.ic.ac.uk/foldoc/foldoc.cgi?application+program>)

provides the following definition of the term "application":

A complete, self-contained program that performs a specific function directly for the user. This is in contrast to system software such as the operating system kernel, server processes and libraries which exists to support application programs. Editors for various kinds of documents, spreadsheets, and text formatters are common examples of applications. Network applications include clients such as those for FTP, electronic mail, telnet and WWW.

Reconsideration of the Examiner's rejection of claims 7-12, 14 and 16-18 under 35 U.S.C. § 103 as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,578,147 (Shanklin et al.) is respectfully requested.

With respect to claim 7, the Examiner interprets the claim limitation of "a plurality of application service devices" as reading on the satellite nodes shown as element 11 in FIG. 1 of Rosenberg et al. The Examiner also appears to suggest that the claimed feature of processing a message refers to encoding or decoding the message, and points to the terminals at the edges of the satellite network as meeting the claimed limitation of a "particular application".<sup>1</sup>

However, Applicants respectfully note that claim 7 recites the limitation "wherein the plurality of application service devices are further configured to process the unprocessed application specific messages" [emphasis added].

If the step of "processing" refers to encoding or decoding as the Examiner appears to suggest, and if the "plurality of application service devices" are the satellite nodes (as the Examiner also suggests), then in order for the aforementioned claim limitation to be met, the satellite nodes would themselves have to encode or decode the packets. Notably, however, there is no mention in Rosenberg et al. of the satellite nodes encoding or decoding messages. To the contrary, the only encoding or decoding mentioned is performed by the aforementioned "terminals at the edges of the satellite". Hence, the Examiner's interpretation of Rosenberg et al. is at odds with the explicit teachings of the reference itself.

For the sake of completeness, Applicants also note that it would not be obvious to encode the packets at the

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<sup>1</sup> The problem with the Examiner's interpretation of the term "application" has been noted above.

satellite nodes rather than at the "terminals at the edges of the satellite" in the system of Rosenberg et al., because this would imply transmission of uncoded messages to the satellite nodes. Such a transmission would be undesirable (and here, the Examiner is respectfully reminded that desirability is a requirement of obviousness) because the transmitted information would be subject to interception.

If the Examiner means to argue instead that the claimed element of processing a message refers to modifying the address information in the message header (rather than encoding or decoding the message), then Rosenberg et al. fails to teach or suggest the element of "wherein the plurality of application service devices are configured to receive a plurality of unprocessed application-specific messages from the fabric". In particular, as previously noted, the Examiner points to the terminals at the edges of the satellite network as meeting the claimed limitation of a "particular application", and the Examiner also points to the satellite nodes as meeting the claim limitation of "application service devices". However, claim 7 also requires that "each unprocessed application-specific message is processed with the particular application for which it is configured" [emphasis added]. Hence, under this interpretation, the application service devices (the satellite nodes) would be receiving unprocessed messages from the very applications (the end terminals) that are required by the claim language to do the processing.

Applicants also note that Rosenberg et al. fails to teach the element in claim 7 of "an application service device adapted to process the message with the particular application" [emphasis added]. As previously noted, the Examiner interprets the satellite nodes in Rosenberg et al. as "application service devices", and interprets the end terminals as "applications". Given this interpretation, it

is not clear how the satellite nodes are adapted to process the messages with the end terminals as required by the above noted claim limitation, since any processing performed by the satellite nodes occurs after uplink or before downlink, and hence occurs independently of the end terminals.

Applicants also note that the Examiner's suggested interpretation of the claim language with respect to Rosenberg et al. does not account for the element "application-specific messages".<sup>2</sup> In particular, if the particular "applications" are the "terminals at the edge of the satellite" as the Examiner proposes, then it is unclear how the messages transmitted over the network can be "application-specific". To the contrary, since messages transmitted over the network must pass through at least one terminal at each edge of the network, they cannot be "application specific" in the way that the Examiner is construing that term. Here, it should be noted that the term "application-specific" cannot refer to the particular encoding or decoding of the message implemented by the end terminals, because claim 7 requires that "the plurality of application service devices [the satellite nodes, in the Examiner's interpretation] are configured to receive a plurality of unprocessed application-specific messages".

With respect to claim 9, the Examiner argues that Col. 10, Lines 9-11 of Rosenberg et al. teach the claimed element that "each application service device comprises a hardware state machine". However, the machine noted in the cited portion of Rosenberg et al. is the cell processor. The cell processor is a component of the cell. Thus, for example, Rosenberg et al. notes that the cell processor "is designed to give the corresponding format to the incoming packets from

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<sup>2</sup> A similar observation may be made with respect to the Examiner's rejection of claim 19.

the source". Since the cell processor is a component of the cell, it is a ground-based component of the network described in Rosenberg et al. However, the Examiner has previously argued that the "application service devices" of claim 7 are the satellite nodes of Rosenberg et al. Since the satellite nodes of Rosenberg et al. do not themselves contain a cell processor, the Examiner has not explained how Rosenberg et al., taken either alone or in combination with Shanklin et al., teaches an information-processing system in which "each application service device comprises a hardware state machine". Hence, the Examiner has failed to establish a prima facie case of obviousness with respect to this claim.

With respect to claim 10, the Examiner concedes that Rosenberg et al. does not teach the element of a plurality of application service devices included in a single integrated circuit, but points to Col. 6, Lines 65-67 of Shanklin for this teaching. However, the cited portion of Shanklin contains no such teaching, but merely states that "Either session-based or packet-based load balancing may be used with any of the three techniques for distributing packets." Indeed, it would be incredible if Shanklin did contain the teaching that the Examiner is ascribing to it. As previously noted, the Examiner has interpreted the claimed element of "application service devices" as reading on the satellite nodes of Rosenberg et al. These satellite nodes are the individual satellites that make up the satellite communications network (see Col. 4, Line 48 of Rosenberg et al. and the referenced element 11 in FIG. 1 thereof). Hence, Applicants respectfully note that, to be consistent with his own arguments, the Examiner would have to take the untenable position that Shanklin teaches the incorporation of a plurality of satellites into a single integrated circuit. This fact underscores the unobviousness of claim 10 over



Rosenberg et al. and Shanklin, taken either alone or in combination.

Reconsideration of the Examiner's rejection of claim 13 under 35 U.S.C. § 103 as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of Troubleshooting (TB) is respectfully requested.

The Examiner concedes that Rosenberg et al. does not teach the element of at least one of the plurality of application service devices comprising an SSL/TLS processor, but relies on TB for this teaching. However, TB does not cure this infirmity, because TB merely recites (in the portion noted by the Examiner) the acronymn SSL/TSL in a software error explanation list. There is no teaching or suggestion in TB or in the primary reference to modify the teachings of Rosenberg et al. so that the satellite nodes described therein (which the Examiner has interpreted as "a plurality of application service devices") contain an SSL/TLS processor. Hence, the Examiner has not established a prima facie case of obviousness with respect to this claim.

Reconsideration of the Examiner's rejection of claim 15 under 35 U.S.C. § 103 as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,578,147 (Shanklin) and further in view of Troubleshooting (TB), is respectfully requested.

Claim 15 depends from claim 14, which in turn depends from claim 7. The infirmities of Rosenberg et al. and Shanklin have been noted above with respect to claim 7. These infirmities are not cured by TB, which has been cited by the Examiner for the limited proposition that SSL/TLS connections between a web browser and a web server are known. Hence, claim 15 is also patentable over the cited art.

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Reconsideration of the Examiner's rejection of claim 22 under 35 U.S.C. § 103 as being unpatentable over U.S. 6,560,450 (Rosenberg et al.) in view of U.S. 6,820,250 (Muthukumar et al.) is respectfully requested.

Claim 22 depends from claim 19. The infirmities of Rosenberg et al. and Shanklin have been noted above with respect to claim 19 and related claim 7. These infirmities are not cured by Muthukumar et al., which has been cited by the Examiner only for its teachings regarding pipelining. Hence, claim 22 is also patentable over the cited art for the reasons advanced with respect to claims 19 and 7.

It is believed that no fees are due with this response.

However, if any fees are due, the Commissioner is hereby authorized to charge these fees, or to credit any overpayment, to the deposit account of Hulsey Grether + Fortkort LLP, Deposit Account No. 50-2726. Please reference our Docket No. LYRN004US0.

Respectfully submitted,

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